

Massachusetts Rifle Association

Walnut Hill

1875



The Legacy of Walnut Hill

By Robert Summa

Volume 5

The Daniel In Forest Chase  
Rifle Display



## Welcome to the Walnut Hill Legacy

We have a rich history we will share as you read this book. We will look at the past and the all-time greats that left their mark on the history of Walnut Hill: the masters of rifle shooting and pistol shooting. They generated the spirit of the Hill through competitive shooting. What they built and shot was a challenge. They were the distinguished shooters of the Hill. They came from all over the country to shoot at Walnut Hill. We have Harry Pope, the greatest barrel maker of his time and a master rifle shooter. We have Niedner, an all-time great, a master rifle shooter, and one of the top gunsmiths of his time who chased Geronamo all over the southwest in the 6th Calvary. Then there is Dr. Mann, the father of ballistics, who in 1909 published *The Bullet's Flight* in his quest for the magic bullet and the magic barrel for the perfect score with the perfect rifle. He was a medical doctor and gave up his practice for his quest in ballistics. Then there are D. L. F. Chase, Ned Roberts, Horace Warner, H. V. Perry, Norman Brockway, C. W. Rowland, H. L. Willard, E. A. Leopold, W. V. Lowe, the Russell brothers, Arthur Corbin Gould, N. C. Nash, O. E. Gerrish, John Kelley, Will Hayes, Dr. W. G. Hudson, the great offhand shot Adolph Strecker, Dr. Bakery, L. P. Hansen, Young, Mr. Fry, Daniel Fox, Major Hinman, and Professor Bell. All are the masters of the rifle. The masters of pistol are C. Paine, Tom Anderton, Eugene Patridge, and Dorothy Knight at Walnut Hill. The riflemen of the Hill, having looked at the American militia team's defeat at Creedmoor, decided to do something about it, so they trained a militia rifle team. Some were members of Walnut Hill and knew the game of long range shooting, and were sent to Creedmoor where they won every event entered. The Walnut Hill riflemen were men of stature: doctors, engineers, and masters of their trade. They were men that enjoyed the shooting sport and did all they could to preserve it for the future generations to come. They shot off hand at ranges of 600, 800, 900, and 1000 yards, holding the finest rifles of their day. H. Pope was the father of the gane twist rifle barrel. Pope and Niedner made barrels for Dr. Mann. We will cover the history of the Dr. Mann barrels in this series of books. The Chase rifles (H. Pope and Niedner experimental rifle) we have, in the Museum. The M.R.A. is a time machine; we can travel back and meet the visionaries of their time to understand the myth and legends of the Walnut Hill riflemen, for the men and women that have walked through the doors of M.R.A. represent the finest part of the shooting sport. You can feel their spirits watching you today when you're on the ranges shooting, for they have left the future generations and the world a legacy of the shooting sport, right here at the M.R.A. Walnut Hill Museum. We have concentrated mostly on these men and women who have captured our imaginations as greater-than-life-size leaders in the shooting sport. We all are historians; we must look at the legacy they have left for the future. As I've said before, we will share the vast history of Walnut Hill with the world. The idea of this series of volumes, 1 through 10, is to record the outstanding history of the Hill for future generations. All proceeds from the selling of these books will go to the Massachusetts Rifle Association to preserve the history of the M.R.A. through our Museum. If you can help, I thank you. I am looking for old photos of Walnut Hill to share with our membership. The one thing I have learned about history: if someone does not record it, it is lost for all time. But these books will present a vast history which we will share with the world. As you read and look at all the photos, know the books will be a treasure for future generations after we have all come and gone. The books detail the Legacy of Walnut Hill. And we will only print 100 books in each series, for this is truly a limited edition!

Robert Summa  
President, M.R.A., at the Walnut Hill Range.

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# The Massachusetts Rifle Association The Rifle Display of Daniel La Forest Chase

I dedicate this book to  
Dick Stanton

~  
Special thanks to  
American Single Shot Rifle News  
for all its help



**M**.R.A. President for twelve years, he was the inventor of the Chase system of patching. His display features his heavy barrel 38-55 Remington Hepburn Rifle, with cast brass muzzle rest, loaded shells, patched bullet starter, patches, micrometer thickness gauge of very ingenious design, etc.... Long the subject of official conversations following the owner's demise in 1920, the contents of his locker-so long frozen-were finally put behind glass as one of the few complete and original outfits for long range black powder shooting.

It was determined from the statistical officer's stubs that in the three days of the 1885 Spring meeting, there were 3421 rounds fired of which 2186 were bulls using an average of 40 grains per shot. This meant the burning of over twenty pounds of black powder in three days. Reason enough, therefore, for the powder house of "Severe Gothic Architecture" to have erected one on the premises.

The D.L.F. Chase display is a trip back in time. You can meet the legend of the shooting sport right here at Walnut Hill. You can understand his pursuit of long range shooting out to 1000 yards and beyond. You can see black powder shooting in its finest hour and the amounts of powder and lead bullets used at the Hill. Even now, we have postal matches with our brothers across the sea at South London Rifle Club; it is a yearly event.

Back in the 1890's, they had telegraph matches from the Hill's very beginning-from as far west as San Francisco, to as far south as Georgetown, British Guyana, to as far north as London, England. As the times changed, they used Amateur Radio, with much greater satisfaction to the competing teams. And today we use the click of a mouse!

In this era, interest in new developments definitely trended towards smaller calibers and higher velocities. The passing of the years have brought with it a continuous round of questions to be answered. A few of them revolved about twist and bullet weight, lubrication, leading, and the patch system; accuracy in hand-guns, unaccountable shot; factors affecting bullet's flight, as wind; development of new bullets and loads, etc. As might be imagined, during the Hill's history, dozens of records have been made and promptly broken at Walnut Hill. Some are spectacular, but all represent consistent hard work in a subject and with tools continually reaching higher levels of excellence. A few remain unbroken to this day, as high scores in prolonged runs of black powder shooting out to 1000 yards and beyond.

What an era, for here we have the distinguished shooters of the M.R.A. in the days of yesteryear. There were heavy caliber coal burners. ( It is recorded that during one match with two hundred entrants, the marksmen had to quit shooting until the smoke drifted enough to clear the targets. ) Nowadays, a calm voiced enthusiast will first try; then give you the lowdown on the relative merits of the Bees, Swifts, Varminters, Lovells, R-22's; or then tell you from comparative experience why he believes so thoroughly in the Roberts .257; or then will expatiate on the outstanding features of hand guns and the manufacturing processes used. The marked variation of their outlines often will demonstrate to your complete satisfaction the deadly accuracy that prolonged practice in shooting can create. As you can see, the time spent at the range tells it all, just by looking at the shots on the paper, in the past century, the major interest with Walnut Hill has always been offhand shooting at 200 yards; the spirit of Walnut Hill has never changed. We are pleased to have you drop by. The Hill is not primarily a place for hosting high pressure matches, nor are we dependent on them. We feel it rather to be a place where a rifleman can go and enjoy range facilities. It is a rifleman's club. We believe that such a spirit will always appeal and will never change.

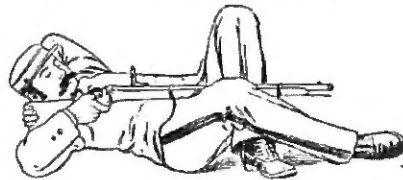
D.L.F. Chase of the Massachusetts Rifle Association was among the most noted rest shooters from about 1886 until the passing years compelled him to stop shooting. He was interested in rifle shooting for recreation and started rest shooting at matches at Walnut Hill in its heyday, 1884. He was a novice in the shooting game. With his persistence in shooting, he became very accurate in shooting the rifle. By 1888, it was generally admitted by his friends that he had no superiors in this type of rifle shooting. At the very outset of his rifle shooting career, he examined the rifles in stock in the Boston gun stores and purchased a 38-55 caliber Ballard of the lower grade. That rifle had a perfect barrel but was without ornamentation of any kind-not a line of engraving-and did not have a pistol grip, but was capable of doing fine shooting in the hands of a skilled rifleman. A shaded aperture front sight was permanently fixed at the muzzle, and a rear peep sight with vernier scale and wind gauge (which he made himself) was attached to the small of the stock. Being a very skillful mechanic, Chase was able to make all of the little appliances necessary for a rifleman's complete outfit. Affixed to the barrel of the rifle about ten inches from the muzzle was a removable piece of sheet metal bent to conform to the shape of the barrel, lined with soft material and fastened to the barrel by a rubber band; the object of this



was to rest the barrel at the same place for each shot and to prevent the rifle from recoiling against a hard surface. Chase used only one shell, and reloaded for each shot. The shell was filled with 50 grains of Dead shot FG black powder; a few taps were given to settle the powder, and a wad was placed down over the powder, leaving a space between the top of the shell and the wad. The bullet he used for the first few years he hand cast and patched himself; they were unswaged and composed of nearly pure lead, weighing 330 grains. Early in 1888 he designed the Chase Patch, and used that method of patching the bullets since it had proven to be superior to the older method. The bullet was, of course, breech seated with a bullet seater, as before

Chase's progress in rest shooting was very marked, and in a short time he had scored 97 and 98 out of a possible 100 on the standard American target. After the 11 and 12 rings were added to that target for rest shooting, he made no scores below 110, and in a short time had made a number of scores of 114, 115, 116, and 117 out of a possible 120.

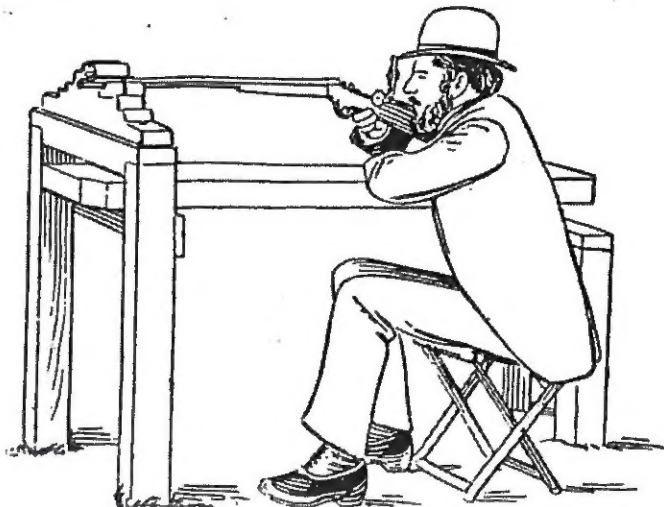
Early in 1891, he bought a new heavy Ballard 38-55 barrel, and after getting it to shoot right-finding the right charge and kind of powder and the right bullet-he commenced making scores of 116 and 117. Then he made a run of ten consecutive 12's, but unfortunately, they were parts of two scores instead of only one score. Up to this time, all his shooting had been with vernier peep and aperture front sights, but upon the introduction of the telescope sight at Walnut Hill, he adopted it; however, the telescope did not enable him to surpass his scores of 117 made with the vernier and aperture sights. That first telescope purchased by Chase was one made for sharpshooters during the Civil War, but he reset the lenses in another tube in such a way that they could not jar loose. The effective length of this scope was only 10 1/2 inches, but the tube was as long as the rifle barrel, the front part being blank. Then he procured a Winchester No. 3 barrel of 38-55 caliber, fitted it to his Hepburn action, and soon made seven scores of 116, three of 117, two of 118, and one of 119 on the standard American rest target before making his perfect score of 120. He made many perfect scores during his rifle shooting career. One of Chase's pleasing characteristics was his willingness to impart his knowledge to other riflemen; he was always glad to help the beginner in rifle shooting.



Mr. Chase joined the Massachusetts Rifle Association in 1885 as an annual member. He became a life member through subscribing to the building fund in 1891. He lived at 236 Goffe Street in Quincy, and ran a factory for the production of candy making machinery at 50 Chardon Street, Boston. As early as May 1885, he made records at rest shooting; 7 shots, then the custom at 200 yards, netting him 67, 68 and 69 on the decimal target then in use. He became a Director in 1887 and from then on served in various official capacities, becoming Vice President in 1893 and from 1898, for 10 years, was President. His shop gave him unusual opportunities for devising new expedients for more accurate marksmanship. He made patterns and castings for the shot indicator clocks, the wind indicator, bench rest gun fittings, etc. He designed and built telescope sight mounts, adjustable for windage and elevation, describing them in "Arms and the Man" on Oct. 24, 1907. Mr. Chase wrote a letter to "Shooting and Fishing," July 19, 1888, in which he says of his single wrap, butt end, patch system: "1. The patch cannot stick after leaving the gun as is true of the double thick twisted kind. 2. There is no irregular fold or bunch of paper on the base of the bullet to cause muzzle deflection. 3. There is much less work than by the old way, although it must be done at the range." Arthur Corbin Gould, editor of "Shooting and Fishing," writing under his pseudonym "Ralph Greenwood" in an article on "patching bullets" said, in part, "....used in America for target shooting with military rifles, in which event a disc of lubricant is placed between the powder retaining wad and bullet. The rifle is not cleaned between shots. The object is to keep the bullet from touching the barrel. Commercially, bank note paper is used. Should be shaped to go around the bullet twice with a butted joint when properly fitted to the unlubricated, ungrooved bullet. Its shape is that of a lozenge, with the base end twisted. This type of patch, occasionally paste started, was not always shed, resulting in poor shots. This the Chase system circumvents." Rest shooting was started at Walnut Hill late in 1881. The 11 and 12 rings on the Hinman target were first used in May 1887. In June 1895, Chase made 13 consecutive 12's (1.41" diam.), a record to that date. His report as President for 1902 noted that there "is a range keeper's house, 50 yard rifle improvements, the 1000 yard range has been reopened and new bulkheads erected, made necessary by the wild shooting of the Charlestown Navy Yard Marines." "Shooting and Fishing," January 14, 1904, states "matches under cover and with table rest are to be put on at 1000 yard, like rest shooting at 200 yards." On Feb. 25, 1904, it



states "patched bullets are going out; grooved, lubricated, breech or even case seated are coming in." Their use was undoubtedly on the wane. Dr. Franklin Weston Mann, in his book "The bullet's flight from powder to target," published in 1909, states that the "Chase patch uses a bullet of bore diameter or less, brought thereto by a single thickness of paper. The Pope system uses a bullet of bore diameter save for an enlarged base band." Mann proved that the centre of gravity being apart from the centre of mass was responsible in bullets for many erratic rest shots. The whole matter was outdistanced by the development of smokeless powder with much higher velocities, less barrel dirt, and the evident need for bullet jackets. Chase's "nom de tir" was "F. Daniels" and most of his records were printed in press reports under that pseudonym, although the annual reports of the association credited him under his real name. He was a consistent marksman at 1000 yards, his favorite distance. On the back and sides of the cabinet are notes in Chase's handwriting indicating the experimental conditions under which new ideas were tried. Contemporary thought believed poor light has a tendency to lower impact, good light to raise it, while changes in barometric pressure, in wind and in temperature, were also believed with some reason to change the bullet's flight. The foolish extent to which these factors were used as alibis was sarcastically commented upon editorially in "Shooting and Fishing" where it was stated that too often they were called upon to cover up poor holding. Wind did cause variation: muzzle velocities were about 1400 feet per second. Chase's table shows a trajectory drop of 76 ft. for 1400 yards. Experience showed the wisdom of heeding wind flags on the range. Chase's other tabular figures refer to clock dial wind indicator points. The letters refer to wind force, as very light, strong, etc.



## The Walnut Hill Shot Clock of 1890

Clock dial wind indicator points to the letters that refer to wind force: very light, strong, etc.

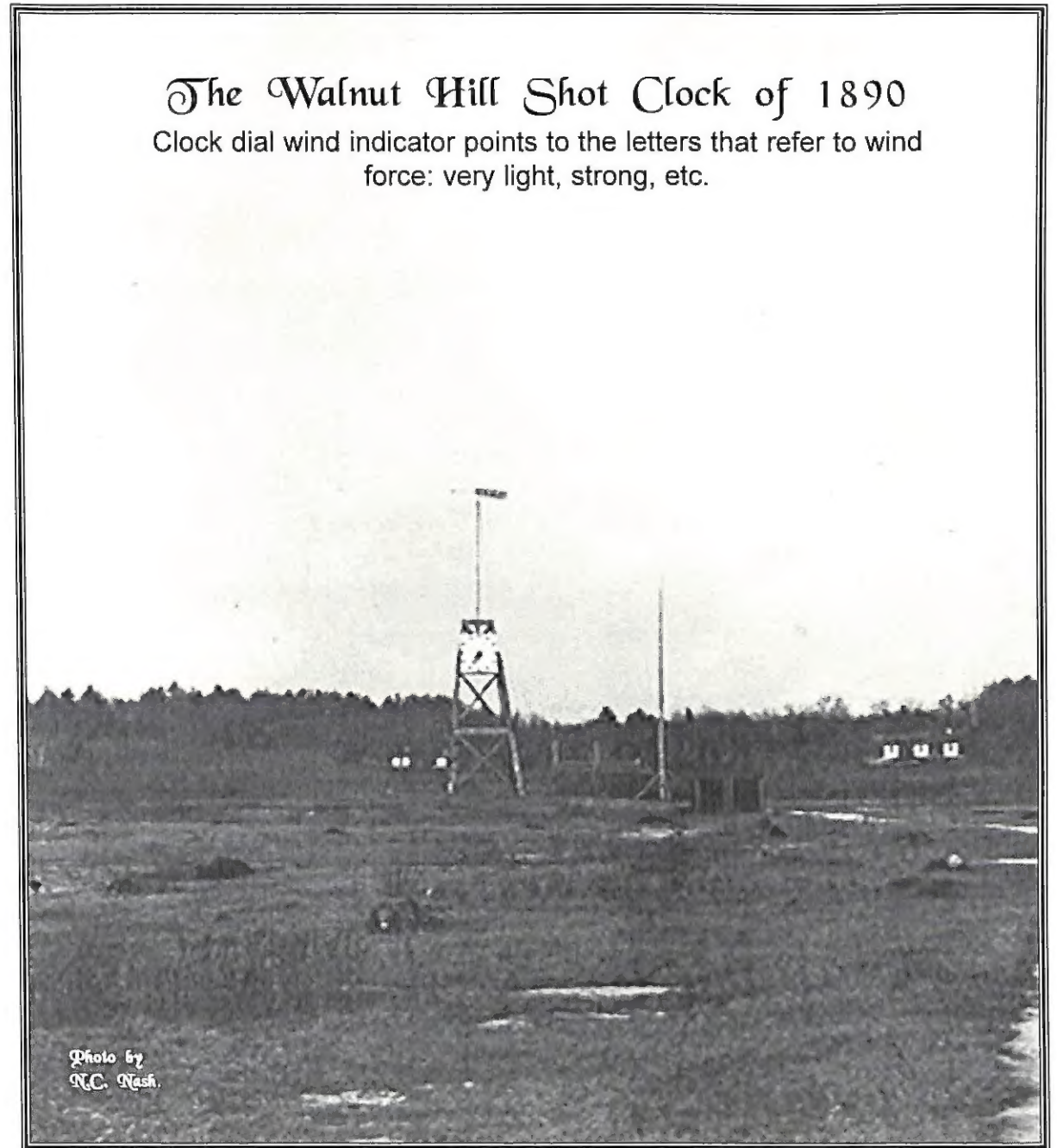


Photo by  
N.C. Nash.

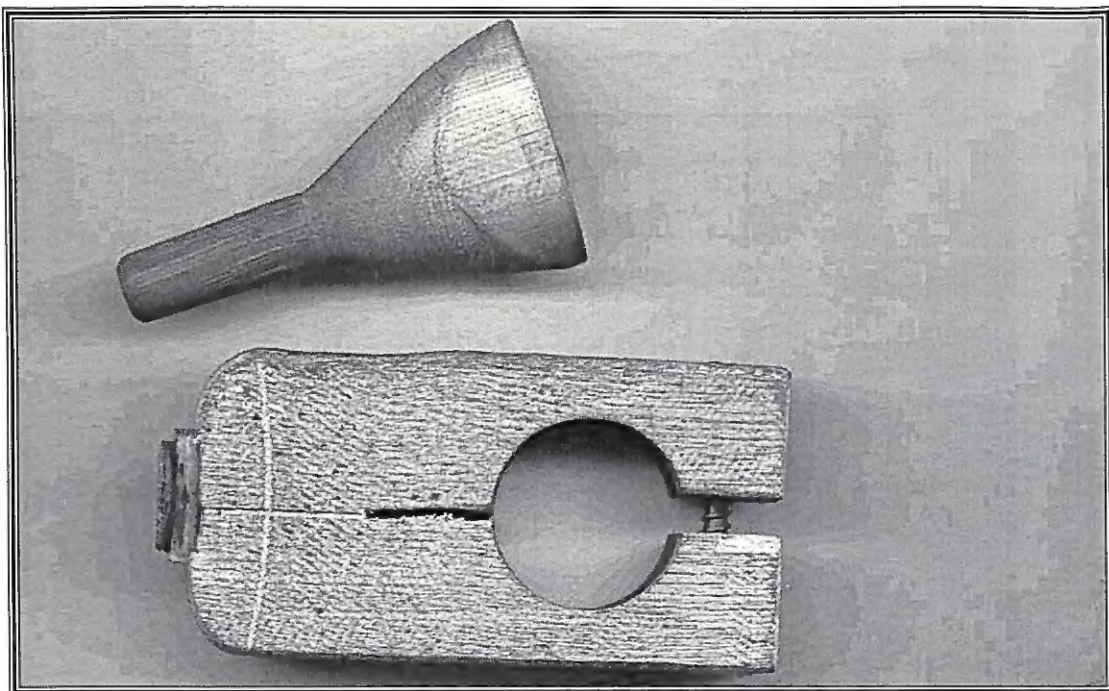




Experience showed the wisdom of heading the wind flags on the range.

Photo by  
N.C. Nash.





Wooden funnel for loading cases with powder, and a cleaning patch cutter



A box of paper patches made from rice paper, .002 thick



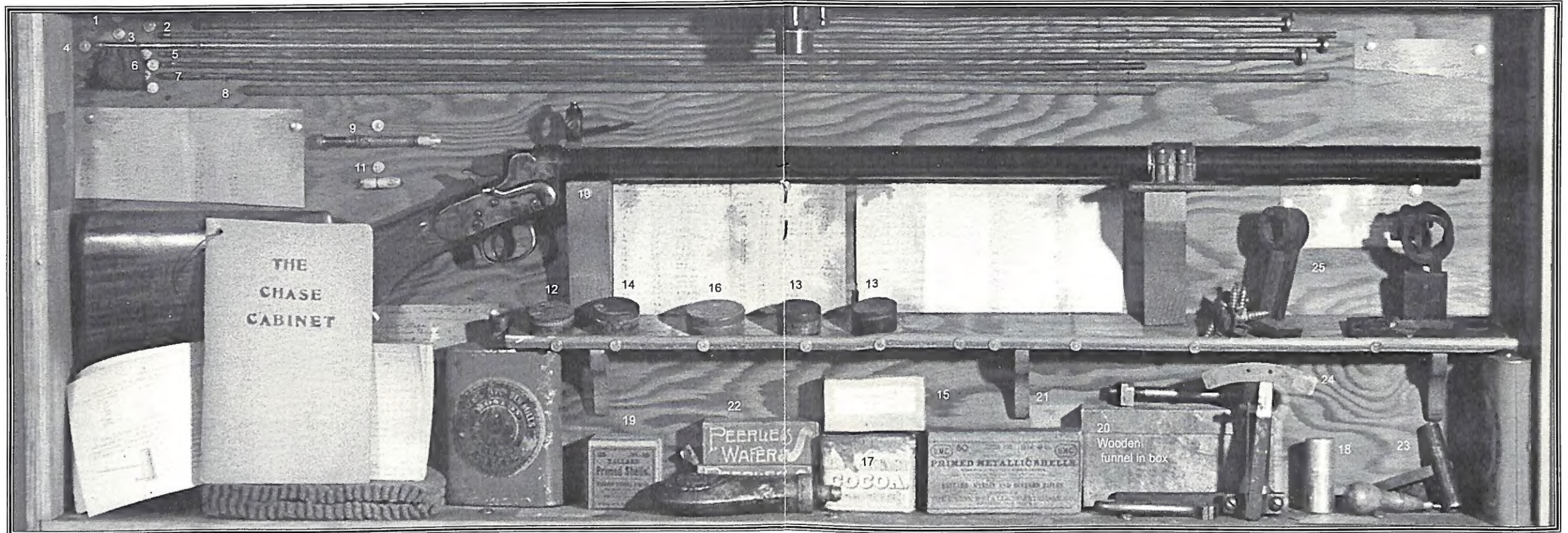
U.M.C. SHELLS



38-55 primed shells



# Welcome to the D.L.F. Chase Cabinet



On the bottom of the cabinet are powder cans of the period; an elbow pad; Laflin and Rand edition of the N.R.A. rules with score sheet open to Chase's 1000 yard entry; power flask; tools; etc.

- 1 Brass cleaning brush soldered to brass staff.
- 2 Pointed patch rod for 38 caliber.
- 3 Slit sawed brass cleaning rod with wire wrapped jag tip.
- 4 Ditto in steel.
- 5 Ditto in brass, but with tube closed and soldered tip.
- 6 Slit sawed cleaner, one leg bent over, tapered and soldered.
- 7 Wood slotted cleaner, selected hard wood.
- 8 Bullet seater for muzzle and breech system.
- 9 Bullet seater, Chase patch system, showing patch and bullet for 32-40.
- 10 Remington Arms Co., Hepburn patent block, 38-55 rifle, no. 9848, with special Winchester No. 3 barrel. Forearm weight added to barrel length; total arm weighing not quite the 12 pound limit then in use. Brass rest support in place. Rear Chase mount for side scope (see his notes) adjustable for wind and and distance. Front mount and scope missing. The barrel is pitted.
- 11 One commercially cast 38 cal. bullet, 324 grs., showing overlapping of a Chase patch. This bullet was cast small enough to take the double thick commercial patch and is .367 inch in diameter.
- 12 Contemporary primers.
- 13 32-40 bullets for Chase system.
- 14 Same, with patches, all just as found.
- 15 Thin patches for 32-40 (.002 inches thick).
- 16 Composition wads.
- 17 Are charged paper waded, 38-55 cases.
- 18 38-55 bullet seater for grooved and lubricated bullets.
- 19 Black powder loaded cases, 38-55.
- 20 Wooden funnel for loading cases with powder.
- 21 Pasteboard box with replacement parts.
- 22 3 boxes with 38 cal. patches of various thicknesses.
- 23 Tools and replacement mainsprings.
- 24 Chase's shop made the micrometer for measuring patch paper thickness.
- 25 Two special castings made for bench rest testing of special barrels.



## Chase's handwritten notes

June 18, 1906

New Winchester Rifle No. 96196

16.2230 Siddle Telescope

Chase Mountings 15" Sight Base

200 yd Elev .01 Temp.

800 yd " .21 89 Thom. B

| Elev | Temp. | Wind         | Elev | Temp. | Wind    | Elev | Temp. | Wind |
|------|-------|--------------|------|-------|---------|------|-------|------|
| .34  | 75    | 8-12L        | .41  | 26    | 1L      | .40  | 32    |      |
| .36  | 58    | 1M           | .39  | 37    | 9-11MS  | .37  | 58    |      |
| .35  | 55    | 1-2M         | .36  | 72    | 9-12MS  | .40  | 32    |      |
| .33  | 87    | 8M           | .37  | 50    | 8-10VL  | .44  | 14    |      |
| .31  | 89    | 10L Thom. B. | .39  | 45    | 11-12MS |      |       |      |
| .35  | 70    | 3-5L         | .35  | 75    | 6VL     |      |       |      |
| .36  | 87    | 5-6L         | .38  | 63    | 5MS     |      |       |      |
| .37  | 62    | 12-3MS       | .36  | 72    | 3-6M    |      |       |      |
| .32  | 67    | 6L           | .33  | 89    | 3-6M    |      |       |      |
| .36  | 52    | 3-6L         | .35  | 77    | 2-5L    |      |       |      |
| .34  | 62    | 4-5VL        | .33  | 90    | 7-9L    |      |       |      |
| .38  | 56    | 11-12MS      | .35  | 72    | 8-8VL   |      |       |      |
| .38  | 52    | 10-11L       | .35  | 75    | 6-8VL   |      |       |      |
| .38  | 45    | 9-11MS       | .34  | 85    | 9M      |      |       |      |
| .39  | 45    | 8-10MS       | .40  | 44    | 10-12MS |      |       |      |
| .37  | 35    | 12-1VL       | .39  | 44    | 11-12MS |      |       |      |
| .38  | 42    | 11-1L        | .37  | 57    | 3-5MS   |      |       |      |
| .38  | 38    | 9-11L        | .40  | 32    | 1MS     |      |       |      |
|      |       |              | .38  | 44    | 9L      |      |       |      |

Same day

Stecher Rifle

New Barrel

200 yd .01

|      | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  | 1200  | 1300  | 1400 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
|      | Feet  | Feet  | Feet  | Feet  | Feet  | Feet  | Feet  | Feet  | Feet  | Feet  | Feet  | Feet  | Feet  | Feet |
| 200  | 0.46  | 0     |       |       |       |       |       |       |       |       |       |       |       |      |
| 300  | 0.99  | 1.07  | 0     |       |       |       |       |       |       |       |       |       |       |      |
| 400  | 1.62  | 2.32  | 1.88  | 0     |       |       |       |       |       |       |       |       |       |      |
| 500  | 2.36  | 3.82  | 4.12  | 2.98  | 0     |       |       |       |       |       |       |       |       |      |
| 600  | 3.23  | 5.54  | 6.70  | 6.43  | 4.31  | 0     |       |       |       |       |       |       |       |      |
| 700  | 4.22  | 7.53  | 9.69  | 10.42 | 9.30  | 5.99  | 0     |       |       |       |       |       |       |      |
| 800  | 5.35  | 9.79  | 13.07 | 14.72 | 14.72 | 12.74 | 7.88  | 0     |       |       |       |       |       |      |
| 900  | 6.60  | 12.29 | 16.83 | 19.74 | 21.19 | 20.26 | 16.65 | 10.03 | 0     |       |       |       |       |      |
| 1000 | 7.99  | 15.06 | 20.99 | 25.78 | 28.10 | 28.57 | 26.34 | 21.10 | 12.46 | 0     |       |       |       |      |
| 1100 | 9.57  | 18.10 | 25.57 | 31.54 | 35.67 | 37.66 | 36.94 | 33.21 | 26.08 | 15.14 | 0     |       |       |      |
| 1200 | 11.16 | 21.40 | 30.49 | 38.15 | 43.95 | 47.56 | 48.50 | 46.41 | 40.93 | 31.62 | 18.13 | 0     |       |      |
| 1300 | 12.95 | 24.98 | 35.87 | 45.31 | 52.90 | 58.31 | 61.03 | 66.73 | 57.02 | 49.57 | 37.79 | 21.45 | 0     |      |
| 1400 | 14.79 | 28.87 | 41.59 | 53.08 | 62.61 | 69.95 | 74.67 | 76.25 | 74.98 | 68.89 | 57.10 | 44.68 | 25.75 | 0    |

## Chase's handwritten notes

| Elev | Temp. | Wind          |
|------|-------|---------------|
| .34  | 31    | 12-3-S        |
| .33  | 34    | 9-6-L         |
| .32  | 44    | 5-7-V-L       |
| .34  | 14    | 8-10-L        |
| .33- | 30    | 9-10-M        |
| .32  | 45    | 12-V-S        |
| .32- | 47    | 4-7-V-L       |
| .33+ | 33    | 2-4-M         |
| .34+ | 32    | 10-12-M-S     |
| .34  | 23    | 12-0 Bob. 307 |
| .32+ | 40    | 10-1-S        |
| .32- | 58    | 6-8-M-S       |
| .32  | 66 58 | 4-5-M         |

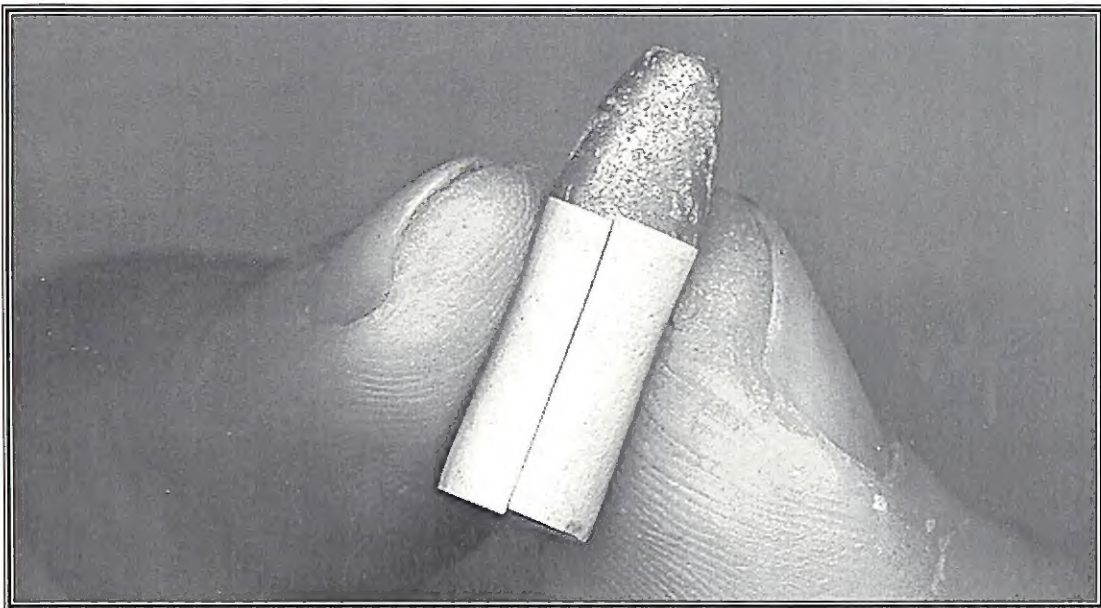
Winchester-Remington .38 Cal

Sight Base 25"

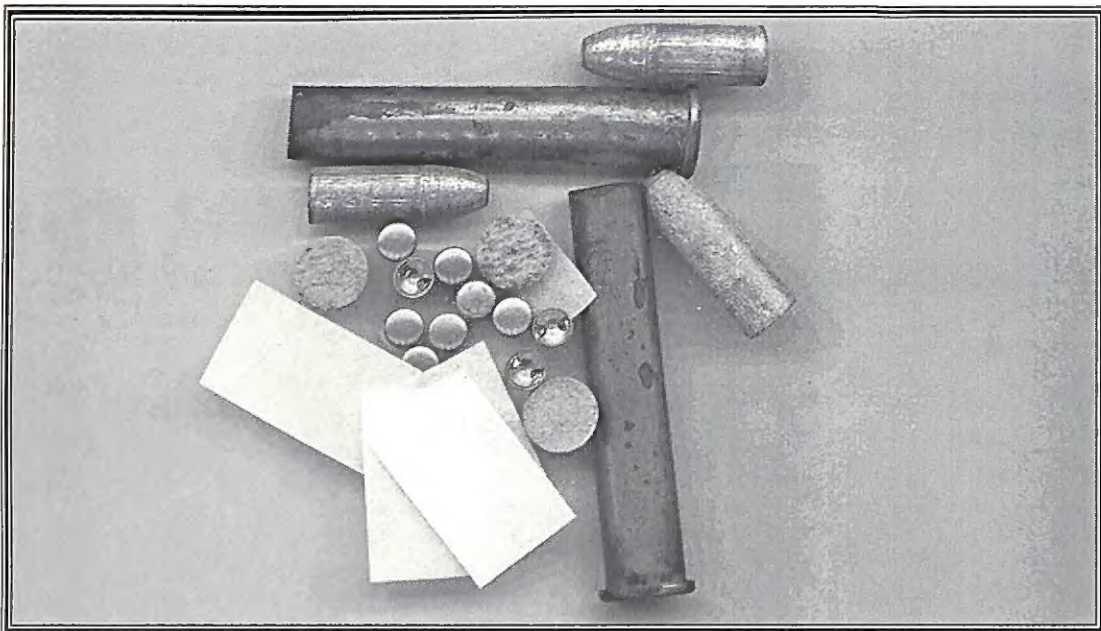
Sight Screw Thread 36

One turn = 8 inches at 200 yds



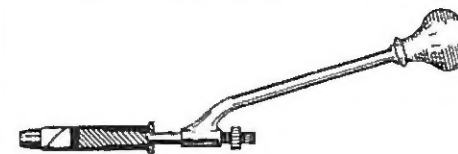


32-40 bullet using the Chase paper patch

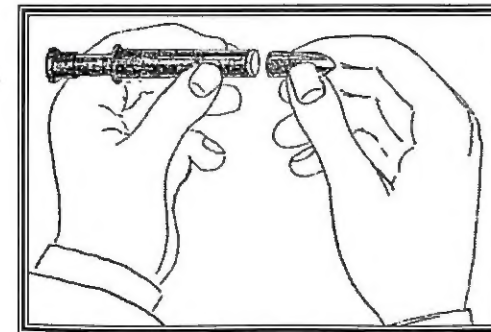


38-55 cases with paper patches and composition wads with some contemporary primers and some cast .38 caliber bullets

### The Ideal Ball Seater



The Ideal Ball Seater could be used with the standard paper patched bullet, Chase's patched bullet, or a grooved bullet. Its function was to seat the bullet in the barrel ahead of a charged cartridge case. The ball seater was essentially a dummy cartridge case with a plunger and handle. The bullet was placed in the dummy case and the entire unit inserted into the chamber of the rifle. A gentle but firm push on the handle seated the bullet in the barrel to a predetermined depth.



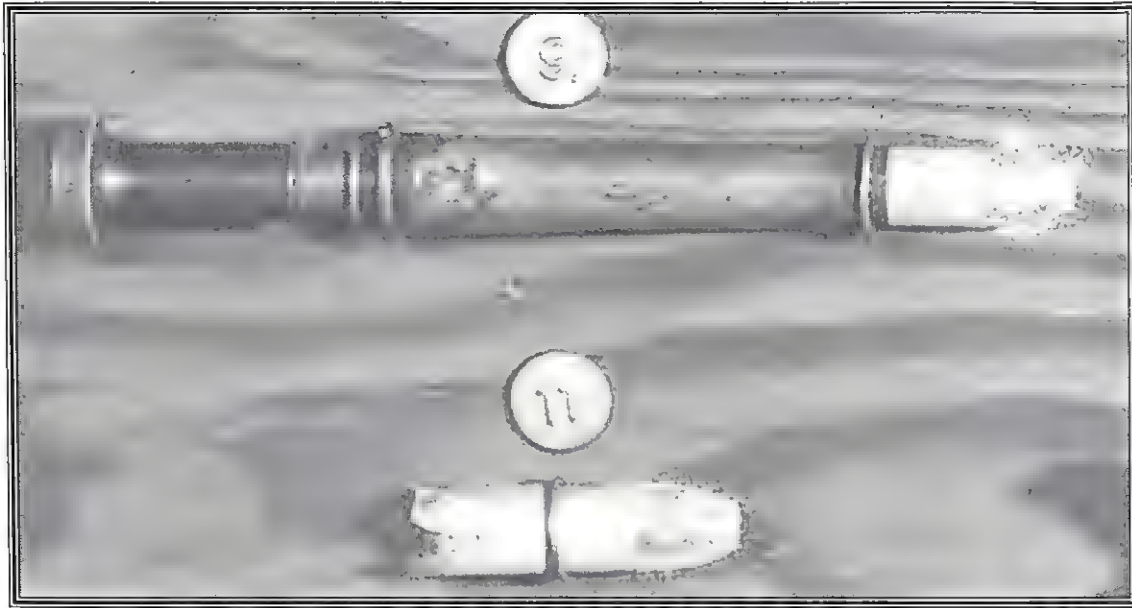
The plug in the ballseater is drawn back; the patch placed in the ballseater; the bullet is placed inside of it.



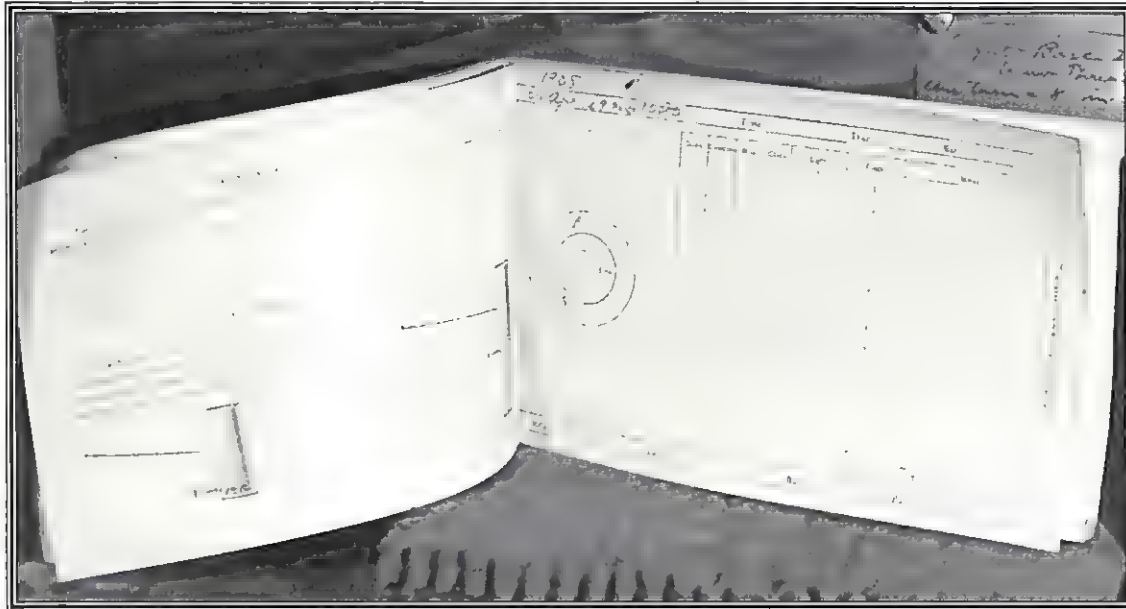
Winchester primers of the period

| Winchester 8 m. Bullet 19 gr. |       |       |       | L. S. Sharp Bullet 19 gr. |       |       |       |
|-------------------------------|-------|-------|-------|---------------------------|-------|-------|-------|
| 36 gr. W. C. Powder           |       |       |       | 42 gr. W. C. Powder       |       |       |       |
| Range                         | Elev. | Range | Elev. | Range                     | Elev. | Range | Elev. |
| 63                            | .25   |       |       | 49                        | .22   |       |       |
|                               |       |       |       | 43                        | .21   |       |       |
|                               |       |       |       | 51                        | .21   |       |       |
|                               |       |       |       | 48                        | .21   |       |       |
|                               |       |       |       | 40                        | .22   |       |       |
|                               |       |       |       | 32                        | .23   |       |       |
|                               |       |       |       | 15                        | .24   |       |       |
|                               |       |       |       | 51                        | .20   |       |       |
|                               |       |       |       | 50                        | .21   |       |       |
|                               |       |       |       | 53                        | .20   |       |       |
| U. S. Sharp Bullet 180 gr.    |       |       |       |                           |       |       |       |
| 38 gr. W. C. Powder           |       |       |       |                           |       |       |       |
| Range                         | Elev. | Range | Elev. |                           |       |       |       |
| 85                            | .26   |       |       |                           |       |       |       |
| 70                            | .27   |       |       |                           |       |       |       |
| 67                            | .28   |       |       |                           |       |       |       |
| 61                            | .28   |       |       |                           |       |       |       |
| 53                            | .29   |       |       |                           |       |       |       |
| 49                            | .31   |       |       |                           |       |       |       |





Top is bullet seater,  
bottom is a paper-patched bullet that is double-rapped



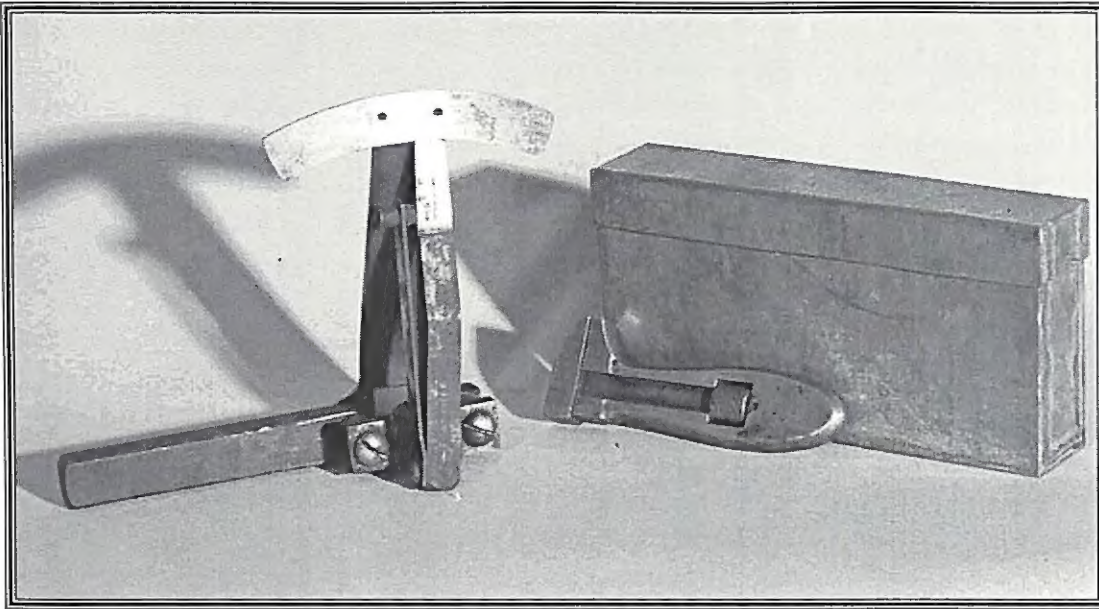
Laflin and Rand edition of the N.R.A. rules with a score sheet opened to  
Chase's 1000 yard entry



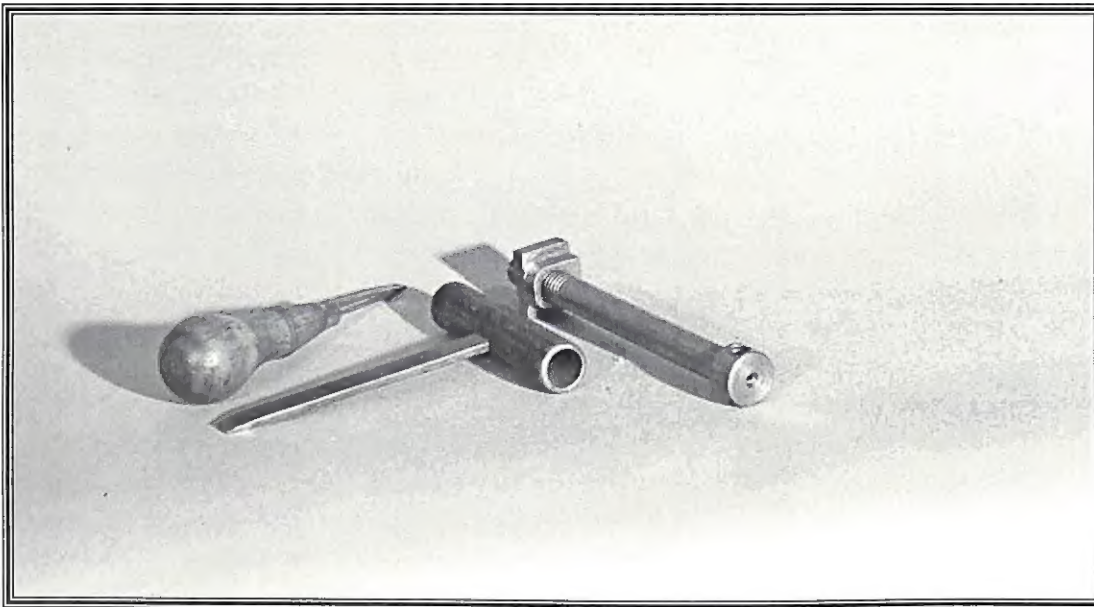
Powder cans of the period







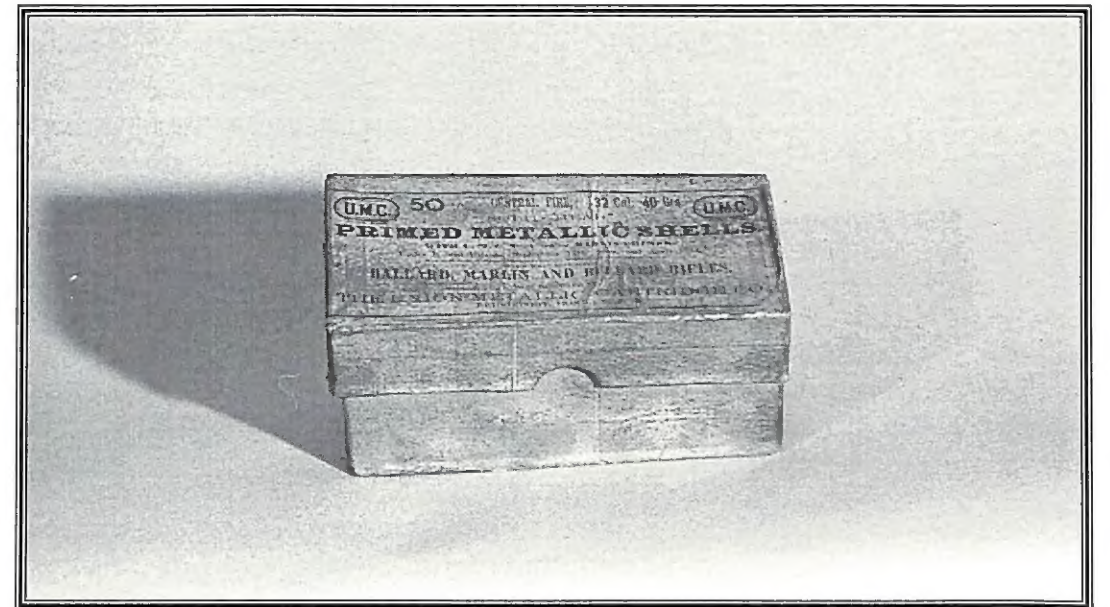
A micrometer for measuring patch paper's thickness;  
a small wrench next to a metal box



Tools used by Chase



Black powder-loaded cases, 38-55, and 3 boxes with 38 caliber patches  
of various thicknesses

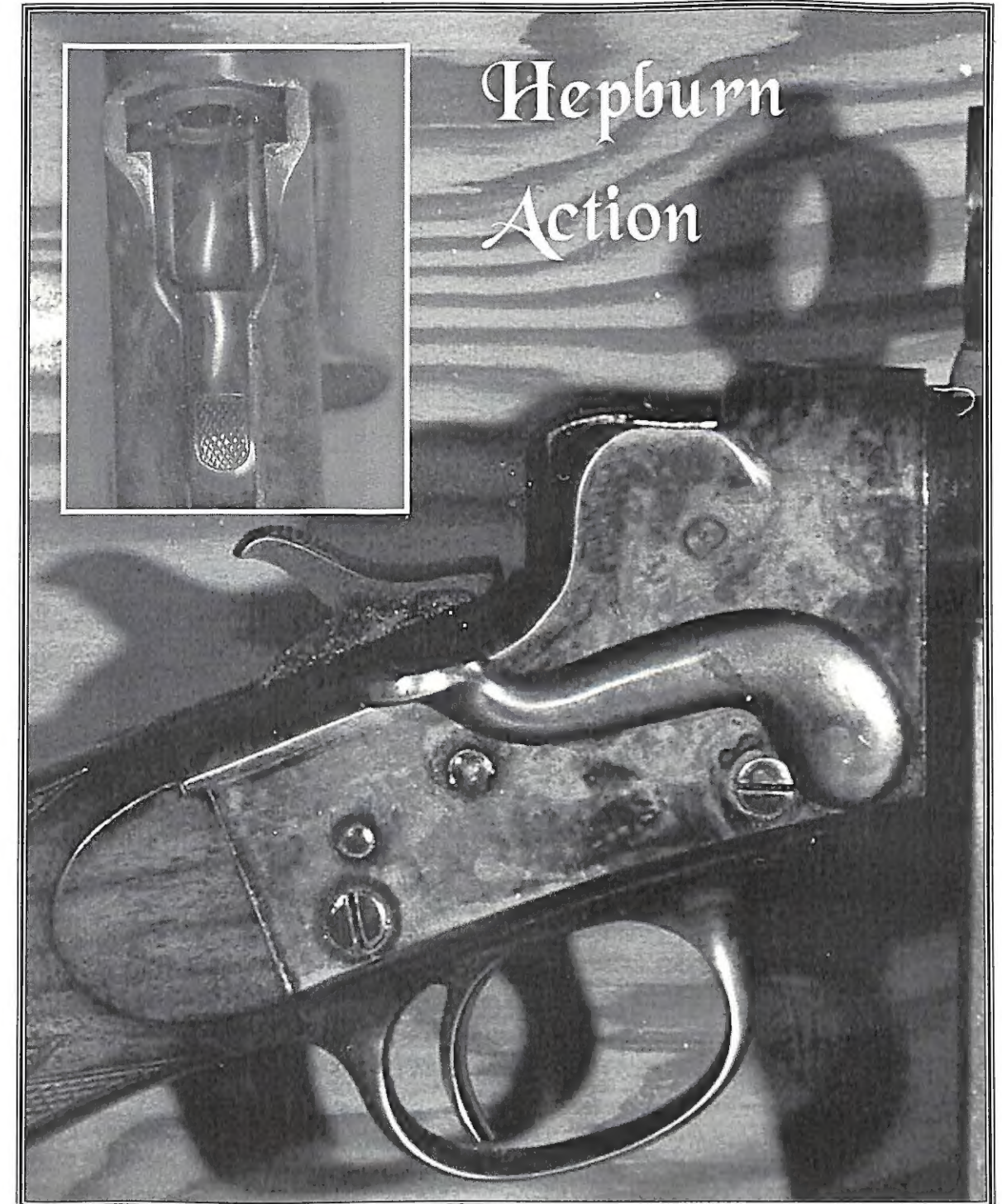


U.M.C. primed metallic shells, 32 caliber, 40 grains of black powder



## The Remington ~ Hepburn

This rifle, invented by Lewis L. Hepburn and first patented in 1879, was manufactured by E. Remington & Sons and later by the Remington Arms Company of Ilion, New York. It was well liked by many expert riflemen for both offhand and rest shooting, especially in certain sections of the country, including New York and New England, between 1880 and 1905. Among shooters other than the experts, it was perhaps even more popular, judging from the considerable number of these rifles found still in use today. Known as the Remington No. 3 rifle, the Hepburn (as it was later called) was also one of our most commonly used single-shot rifles, being produced in about all of the popular calibers, both large and small, including those brought out by other companies. The Remington-Hepburn action is a falling-block, operated by a short lever on the right-hand side of the receiver, with the breechblock rising and falling vertically in slots or channels milled into the sidewalls of the receiver. Both the breechblock and receiver walls are thicker than those of the Winchester single-shot rifle, and as these parts were made of splendid materials, the action is fully as strong as the casehardened Winchesters. All parts of the Remington-Hepburn rifles were made of excellent materials; all metal parts were carefully finished, well hardened, and nicely fitted; the receivers were beautifully casehardened in colors; the stocks were of fine quality walnut, excellently fitted, finished, and well-shaped for offhand or rest shooting. The pistol grip on these stocks was only a half-pistol grip, which did not afford any assistance in holding or added much to the appearance of the stock, but the cheekpiece on their No. 3 Match rifle and other high-grade models was excellently shaped, well positioned on the stock, and fitted the face of the average rifleman better than that on the majority of machine-made stocks. The checkering on the fore-end and grip showed especially good workmanship. The trigger pulls were invariably quite good. The chief defect of this rifle is the side lever operating the breechblock, which, because it is so short, does not afford sufficient leverage to extract a shell that sticks tightly. The vertically operating breechblock cannot be closed until the cartridge is fully entered in the chamber, and the extractor, while strong, ejects the shell, but a short distance out of the chamber. For the average man, it fits and balances very nicely for offhand shooting. On the other hand, the Hepburn side lever permitted easy reloading when in the prone position, either hunting or back-rest at targets.





## Daniel L.F. Chase

Was President in 1908 and lived in Quincy, Mass., at 236 Goffe Street. He was on the range committee. Chase did all his shooting at bench rest from 200 yards to 1000 yards, and beyond. Chase joined the M.R.A. in 1885 and was a Life Member of the Hill. He won the Gold Victory Medal using the Standard American Target in 1894. His scores were as follows:

116-117-115-115-114-115-114-116-116-119

He also won the Victory Trophy Match in 1897 and 1898, as well as in 1903 and 1904. His scores were as follows:

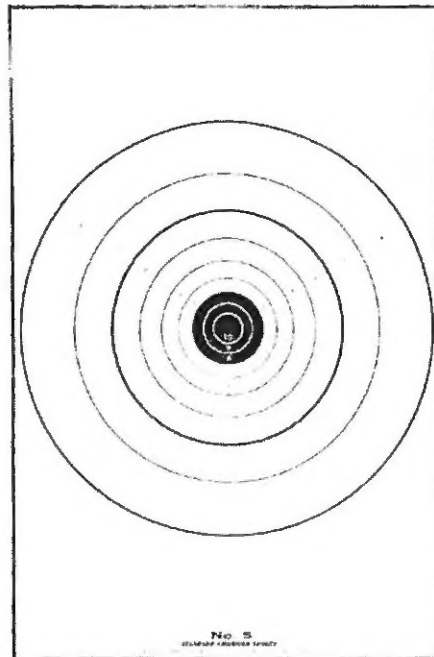
1897 - 111-117-115 = 343

1898 - 114-107-114 = 335

1903 - 111-115-110 = 336

1904 - 115-113-115 = 343

All shot at rest using the Standard American Target.  
All scores were shot at Walnut Hill.



## Robert P. Summa

The Adventure of Walnut Hill started the first day I joined the M.R.A. in the early days of the 70's. I have met some great and exciting members of Walnut Hill; the movers and shakers, the trend setters of the shooting sport. I have been a Director, 1st Vice President, 2nd Vice President, and President over the years; it has been exciting! I have been writing the Legacy books, and have enjoyed doing it. I have learned a lot in my research of M.R.A.; it is staggering what has happened at Walnut Hill in the past century. What an Adventure! It's like going into the burial chambers of the Great Pyramids of Egypt. In my Quest for the knowledge of Walnut Hill, I find now that it is time for me to retire as President of M.R.A. If there is anything you do in your life, read the Walnut Hill Legacy volumes; it will be the greatest story ever told, for we all leave a legacy at Walnut Hill. We are all part of the story of the Hill for future generations to come.

## Massachusetts Rifle Past Presidents

|           |                       |           |                    |
|-----------|-----------------------|-----------|--------------------|
| 1875      | Isaac H. Hazelton     | 1934-1935 | W.S. Gibbons       |
| 1876      | Horace B. Sargent     | 1936      | R.E. Gibson        |
| 1877-1878 | Charles A. Longfellow | 1937-1939 | A.P. Lambert       |
| 1879-1880 | James N. Frye         | 1940      | John J. Murray     |
| 1881-1882 | Lucius L. Hubbard     | 1941      | George E. Thompson |
| 1883-1888 | Horace T. Rockwell    | 1942      | Walter S. Gibbons  |
| 1889-1890 | Lucius L. Hubbard     | 1943-1944 | Joseph F. Galligan |
| 1891-1892 | Nathaniel C. Nash     | 1945      | John T. Murray     |
| 1893      | Horace T. Rockwell    | 1946-1948 | Dr. Jose P. Bill   |
| 1894-1895 | Jabez B. Fellows      | 1949-1957 | Austin McHugh      |
| 1896-1897 | Francis J. Rabbeth    | 1958-1959 | H.E. Nelson        |
| 1898-1908 | Daniel L.F. Chase     | 1960-1964 | E.P. Matson        |
| 1909-1911 | Samuel Merrill        | 1965      | T. Driscoll        |
| 1912-1916 | Charles W. Hinman     | 1966-1967 | R. Graves          |
| 1917      | Daniel L.F. Chase     | 1968-1969 | G. Hutchinson      |
| 1918-1920 | Louis Bell            | 1969-1976 | Arthur R. White    |
| 1921-1922 | W.E. Fennel           | 1977-1979 | William Buehler    |
| 1923      | J.E. Kelley           | 1980-1982 | Arthur R. White    |
| 1924      | C.G. Bills            | 1983-1985 | Richard T. Boyle   |
| 1925      | H.H. Bennett          | 1986      | Robert A. Ripley   |
| 1926      | O.E. Gerrish          | 1987-1988 | Richard T. Boyle   |
| 1927      | W.S. Darling          | 1989-1994 | Robert P. Summa    |
| 1928      | F.G. Beckford         | 1995      | Jack Lydon         |
| 1929      | Dr. H.R. Brunton      | 1996-1998 | Robert Ouellette   |
| 1930      | F.E. Whipple          | 1999-2000 | Robert P. Summa    |
| 1931-1933 | R.J. Dwyer            |           |                    |



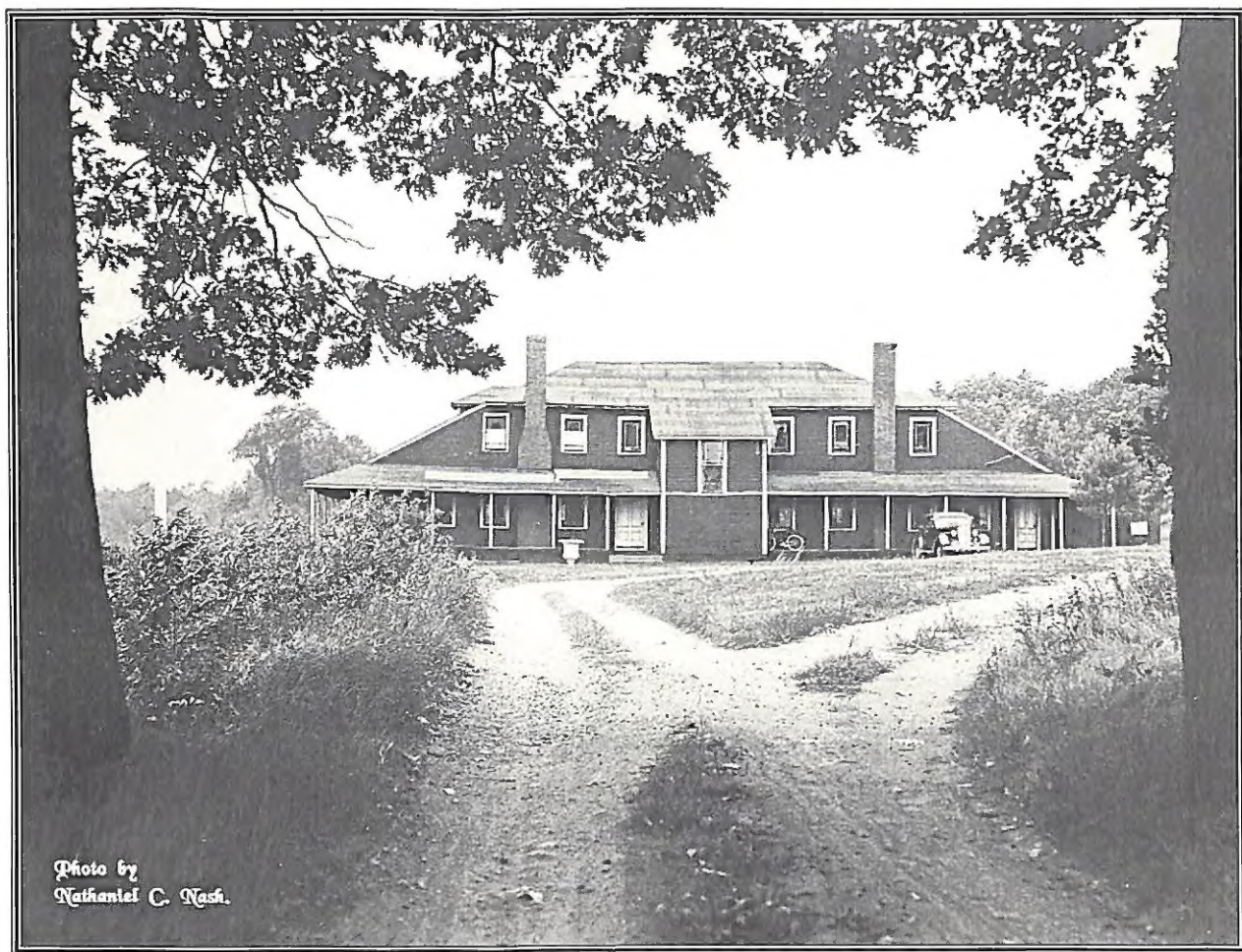


Photo by  
Nathaniel C. Nash.

# Massachusetts Rifle Association Walnut Hill

July 7, 1939

As we enter the clearing, we find M.R.A. Walnut Hill is where some say the pride of a nation was aroused and the best stepped forward to represent America in rifle shooting. But it also was due to Creedmoor, Morsemer. We all made history, and we all are proud of the American Riflemen.